WHAT IS CLAIMED IS:

1. An endoscopic mucous membrane resection instrument comprising:

a transparent cap section detachably attached to a distal end portion of an endoscope, the cap section including a cylindrical body having a substantially circular shape, a flange-like first projection portion projecting inward from the cylindrical body in a vicinity of a distal end edge of the cylindrical body, and a second projection portion that projects inward and is provided on an inner peripheral surface of the cylindrical body at a position spaced apart from the first projection portion;

a flexible tube having a distal end portion and a proximal end portion, the tube being extended along an insertion section of the endoscope and the distal end portion of the tube being fixed in a state in which the distal end portion of the tube communicates with the cap section, when the cap section is attached to the endoscope;

a first endoscopic treatment instrument for a mucous membrane resection work, which has an insertion section to be removably inserted in the tube, the treatment instrument having a first loop portion for mucous membrane resection at a distal end portion of the insertion section thereof, the first loop portion being broadened and disposed along an inner peripheral

surface of the cylindrical body in a state in which the first loop portion is engaged with the first projection portion, when the insertion section of the first endoscopic treatment instrument is inserted in the tube; and

a second endoscopic treatment instrument having an insertion section to be removably inserted in the tube, the second endoscopic treatment instrument being inserted in the tube after a first mucous membrane resection work by the first endoscopic treatment instrument, thereby performing a second mucous membrane resection work, the treatment instrument having a second loop portion for mucous membrane resection at a distal end portion of the insertion section thereof, the second loop portion being broadened and disposed along the inner peripheral surface of the cylindrical body in a state in which the second loop portion is engaged with the second projection portion, when the insertion section of the second endoscopic treatment instrument is inserted in the tube.

2. The endoscopic mucous membrane resection instrument according to claim 1, wherein each of the first endoscopic treatment instrument and the second endoscopic treatment instrument is a diathermic snare in which each of the first and second loop portion is formed of a snare wire.

3. An endoscopic mucous membrane resection

instrument comprising:

a transparent cap section detachably attached to a distal end portion of an endoscope, the cap section including a cylindrical body having a substantially circular shape, and a flange-like projection portion projecting inward from the cylindrical body in a vicinity of a distal end edge of the cylindrical body;

a plurality of flexible tubes for insertion of treatment instruments, each of the tubes having a distal end portion and a proximal end portion, each of the tubes being extended along an insertion section of the endoscope and the distal end portion of the tube being fixed in a state in which the distal end portion of the tube communicates with the cap section, when the cap section is attached to the endoscope;

a first endoscopic treatment instrument for a mucous membrane resection work, which has an insertion section to be removably inserted in one of the tubes, the treatment instrument having a first loop portion for mucous membrane resection at a distal end portion of the insertion section thereof, the first loop portion being broadened and disposed along the inner peripheral surface of the cylindrical body in a state in which the first loop portion is engaged with the projection portion, when the insertion section of the first endoscopic treatment instrument is inserted in the tube; and

a second endoscopic treatment instrument having an insertion section to be removably inserted in the tube other than the tube in which the first endoscopic treatment instrument is inserted, the treatment instrument having a second loop portion for mucous membrane resection at a distal end portion of the insertion section thereof, the second loop portion being broadened and disposed along the inner peripheral surface of the cylindrical body in a state in which the second loop portion is engaged with the projection portion, when the insertion section of the second endoscopic treatment instrument is inserted in the tube.

4. The endoscopic mucous membrane resection instrument according to claim 3, wherein each of the first endoscopic treatment instrument and the second endoscopic treatment instrument is a diathermic snare in which each of the first and second loop portion is formed of a snare wire.

5. An endoscopic mucous membrane resection instrument comprising:

a transparent cap section detachably attached to a distal end portion of an endoscope, the cap section including a cylindrical body having a substantially circular shape, a flange-like first projection portion projecting inward from the cylindrical body in a vicinity of a distal end edge of the cylindrical body,

and a second projection portion that projects inward and is provided on an inner peripheral surface of the cylindrical body at a position spaced apart from the first projection portion;

two flexible tubes for insertion of treatment instruments, each of the tubes having a distal end portion and a proximal end portion, each of the tubes being extended along an insertion section of the endoscope and the distal end portion of the tube being fixed in a state in which the distal end portion of the tube communicates with the cap section, when the cap section is attached to the endoscope;

first and second endoscopic treatment instruments having insertion sections to be removably inserted in the tubes respectively, each of the treatment instruments having a loop portion at a distal end portion of the insertion section thereof, the loop portion being broadened and disposed along the inner peripheral surface of the cylindrical body in a state in which the loop portion is engaged with one of the first projection portion and the second projection portion, when the insertion sections of the first and second endoscopic treatment instruments are inserted in the tubes; and

treatment instrument setting means for setting at the same time a first endoscopic treatment instrument setting state in which the loop portion of the first

endoscopic treatment instrument removably inserted in one of the tubes is broadened and disposed on an inner peripheral surface of the cylindrical body in a state in which the loop portion of the first endoscopic treatment instrument is engaged with the first projection portion, and a second endoscopic treatment instrument setting state in which the loop portion of the second endoscopic treatment instrument removably inserted in the other tube is broadened and disposed on the inner peripheral surface of the cylindrical body in a state in which the loop portion of the second endoscopic treatment instrument is engaged with the second projection portion.

6. The endoscopic mucous membrane resection instrument according to claim 5, wherein the first endoscopic treatment instrument includes a ligator in which the loop portion is formed of a ligation loop capable of tightly binding and ligating a living tissue, and

the second endoscopic treatment instrument is a diathermic snare in which the loop portion is formed of a snare wire.

7. An endoscopic mucous membrane resection method comprising:

a resection instrument setting step of fitting an endoscopic mucous membrane resection instrument on a distal end portion of an insertion section of

an endoscope, the endoscopic mucous membrane resection instrument being set in a state in which a first diathermic snare is preset in a cap section such that a loop portion of the first diathermic snare is engaged on a first projection portion formed at a distal end portion of the cap section and the loop portion is broadened along an inner peripheral surface of the cap section;

a step of inserting the endoscope and the resection instrument into a body cavity and moving a distal opening portion of the cap section toward a target to-be-resected mucous membrane;

a step of causing a suction force to act within the cap section in a state in which the distal opening portion of the cap section is pushed on the mucous membrane, thereby sucking and raising a to-be-resected part of the mucous membrane within the cap section by a negative pressure;

a step of reducing a size of the loop portion of a snare wire of the first diathermic snare by operating the first diathermic snare, thereby tightly binding a proximal portion of a raised part of the mucous membrane;

a first mucous membrane resection work step of causing a high-frequency current to flow in the snare wire while strangulating the proximal portion of the raised part by the loop portion of the snare wire,

thereby resecting the to-be-resected part of the mucous membrane;

a step of removing the first diathermic snare used in the preceding steps from the resection instrument after the completion of the first mucous membrane resection work; and

a second resection work step of resecting a remaining part of the mucous membrane, which is not resected by the first resection work,

the second resection work step including:

a step of moving the distal opening portion of the cap section toward a second to-be-resected part of the target mucous membrane in a state in which the first diathermic snare is not set in the resection instrument;

a step of causing a suction force to act within the cap section in a state in which the distal opening portion of the cap section is pushed on the second to-be-resected part of the mucous membrane, thereby sucking and raising the second to-be-resected part of the mucous membrane within the cap section by a negative pressure;

a step of broadening a loop portion of a second diathermic snare along an inner peripheral surface of the cap section and disposing the loop portion on a second projection portion which projects inward and is provided at a position spaced apart from the first

projection portion;

a step of largely raising the second to-be-resected part of the mucous membrane by sucking the second to-be-resected part more strongly than before insertion of the second diathermic snare;

a step of reducing a size of the loop portion of a snare wire of the second diathermic snare by operating the second diathermic snare, thereby tightly binding a proximal portion of the second to-be-resected part of the mucous membrane;

a second resection work step of causing, like the first resection work, a high-frequency current to flow in the snare wire while strangulating the proximal portion of the to-be-resected part by the loop portion of the snare wire, thereby resecting the remaining to-be-resected part; and

a recovery step of recovering, after the completion of the second resection work, the resected part of the mucous membrane resected by the second resection work and the resected part of the mucous membrane resected by the first resection work in the state in which both the resected parts are sucked and held in the cap section, by taking out both the resected parts from the body cavity along with the endoscope.

8. An endoscopic mucous membrane resection method comprising:

a resection instrument setting step of fitting an endoscopic mucous membrane resection instrument on a distal end portion of an insertion section of an endoscope, the endoscopic mucous membrane resection instrument being set in a state in which two diathermic snares are preset in a cap section such that loop portions of the two diathermic snares are engaged on a projection portion formed at a distal end portion of the cap section and the loop portions are broadened along an inner peripheral surface of the cap section;

a step of inserting the endoscope and the resection instrument into a body cavity and moving a distal opening portion of the cap section toward a target to-be-resected mucous membrane;

a step of causing a suction force to act within the cap section in a state in which the distal opening portion of the cap section is pushed on the mucous membrane, thereby sucking and raising a to-be-resected part of the mucous membrane within the cap section by a negative pressure;

a step of reducing a size of the loop portion of a snare wire of one of the diathermic snares by operating said one of the diathermic snares, thereby tightly binding a proximal portion of a raised part of the mucous membrane;

a first mucous membrane resection work step of causing a high-frequency current to flow in the snare

wire while strangulating the proximal portion of the raised part by the loop portion of the snare wire, thereby resecting the to-be-resected part of the mucous membrane;

a step of removing the diathermic snare used in the preceding steps from the resection instrument after the completion of the first mucous membrane resection work; and

a second resection work step of resecting a remaining part of the mucous membrane, which is not resected by the first resection work,

the second resection work step including:

a step of moving the distal opening portion of the cap section toward a second to-be-resected part of the target mucous membrane;

a step of causing a suction force to act within the cap section in a state in which the distal opening portion of the cap section is pushed on the second to-be-resected part of the mucous membrane, thereby sucking and raising the second to-be-resected part of the mucous membrane within the cap section by a negative pressure;

a step of tightly binding a proximal portion of a raised part of the mucous membrane by the loop portion of the snare wire by operating the diathermic snare other than the diathermic snare used in the first resection work;

a second resection work step of causing a high-frequency current to flow in the snare wire while strangulating the proximal portion of the raised part by the loop portion of the snare wire, thereby resecting the remaining to-be-resected part; and

a recovery step of recovering, after the completion of the second resection work, the resected part of the mucous membrane resected by the second resection work and the resected part of the mucous membrane resected by the first resection work in the state in which both the resected parts are sucked and held in the cap section, by taking out both the resected parts from the body cavity along with the endoscope.

9. An endoscopic mucous membrane resection method comprising:

a resection instrument setting step of fitting an endoscopic mucous membrane resection instrument on a distal end portion of an insertion section of an endoscope, the endoscopic mucous membrane resection instrument including a transparent cap section detachably attached to the distal end portion of the endoscope, one diathermic snare and one ligator, the endoscopic mucous membrane resection instrument being set in a state in which a loop portion of the ligator is engaged in advance on a first projection portion formed at a distal end portion of the cap section and

the loop portion is broadened along an inner peripheral surface of the cap section, and also set in a state in which a loop portion of the diathermic snare is engaged on a second projection portion projecting inward at a position spaced apart from the first projection portion and the loop portion is broadened along the inner peripheral surface of the cap section;

a step of inserting the endoscope and the resection instrument into a body cavity and moving a distal opening portion of the cap section toward a target to-be-resected mucous membrane;

a step of causing a suction force to act within the cap section in a state in which the distal opening portion of the cap section is pushed on the mucous membrane, thereby sucking and raising a to-be-resected part of the mucous membrane within the cap section by a negative pressure;

a step of reducing a size of the loop portion of a ligation loop by operating the ligator, thereby tightly binding a proximal portion of a raised part of the mucous membrane;

a step of releasing the ligation loop and keeping a state in which the proximal portion of the raised part of the mucous membrane is tightly bound by the ligation loop;

a step of sucking in the cap section the raised part of the mucous membrane tightly bound by the

ligation loop;

a step of reducing a size of the loop portion of a snare wire by operating the diathermic snare, thereby tightly binding an upper-side portion of the raised part of the mucous membrane that is already tightly bound by the ligation loop;

a resection work step of causing a high-frequency current to flow in the snare wire while strangulating the upper-side portion of the raised part of the mucous membrane by the loop portion of the snare wire, thereby resecting the to-be-resected part of the mucous membrane; and

a recovery step of recovering, after the completion of the resection work, the resected part of the mucous membrane resected by the resection work in a state in which the resected part is sucked and held in the cap section, by taking out the resected part from the body cavity along with the endoscope.